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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,816	11/26/2003	Gilles Couvrette		9814

7590 12/29/2005

## INVENTARIUM

Suite 1607  
4050 Rosemont Blvd  
Montreal, QC H1X 1MR  
CANADA

EXAMINER
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LUKS, JEREMY AUSTIN

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/723,816	Applicant(s) COUVRETTE, GILLES	
	Examiner Jeremy A. Luks	Art Unit 2837	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/26/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show (1) a sliding rod activation means and (2) an attachment means for connecting the control unit of said activation means as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claims 4 and 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 4 is dependent on Claim 3 which claims a sliding rod being activated by an actuation means. Claim 4 gives suggestions for said actuation means, but does not limit it to only those suggestions. Thus not further limiting the previous claim. Claim 5 depends on the objected Claim 4 and includes all the limitations of that claim and is therefore objected.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson (6,158,546) in view of House (3,076,521), and further in view of Yuen (4,428,453).

With respect to Claim 1, Hanson describes an exhaust muffler comprising an outer cylinder and inner resonator creating a muffler chamber having an entrance port through which gases enter. Hanson further describes an inner resonator having a plurality of holes along its length with a secondary resonator between said inner resonator and exit port (See Figure 1 and supporting specification).

Hanson fails to describe a resonator cone to divert gases; a moveable plug to vary surface area for exiting gases; a sliding rod to actuate said moveable plug; and an annular passage surrounding said moveable plug to increase surface area for exiting exhaust gases.

House describes an exhaust muffler with a resonator cone and moveable plug creating an annular passage when said moveable plug is in an open configuration, increasing exit surface area and decreasing surface area when said moveable plug is in a closed configuration (See Figure 1 and supporting specification).

House fails to describe a sliding rod to actuate said moveable plug.

Yuen describes a sliding rod for means of actuation (See Figure 1, #5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muffler of Hanson by incorporating a resonator cone and a moveable plug in view of House in order to more efficiently divert the flow of exhaust to the muffler chamber and create an annular passage and vary the surface

area of the exit port in order to acquire a desired level of sound exiting said muffler respectively. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the sliding rod of Yuen to the mufflers of Hanson and House in order to actuate the moveable plug from outside of the muffler enclosure.

With respect to Claim 2, this is a method claim dependent on an apparatus claim which is given little patentable weight as the method of use does not add a structural limitation to the apparatus claim as described by Hanson over Hall, in further view of Yuen.

With respect to claim 3, as applied to Claim 1 above, Yuen describes a sliding rod being activated by a manual actuation means (See Col. 2, Lines 4-6).

With respect to Claim 4, as applied to Claims 1 and 3 above, the contents of the claim recommended selections from a group but not limited to that group. As such, the manual actuation means is within the scope of the claim language and is previously taught by Yuen (See Col. 2, Lines 4-6).

With respect to Claim 5, as applied to Claims 1, 3 and 4 above, Yuen describes an attachment means provided for said actuation means in the form of a moveable sliding rod protruding from the muffler apparatus, allowing the user to grasp said moveable rod, thus creating an attachment means to manually actuate said moveable rod (See Col. 2, Lines 4-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mufflers of Hanson and House in view of Yuen by

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incorporating the sliding rod, actuation means for said sliding rod, and attachment means for said actuation means in order to adjust the position of the moveable plug from outside of the muffler enclosure.

With respect to Claims 7 and 8, as applied to Claim 1 above, Hanson describes supporting segments for an inner resonator within the center of an outer cylinder, as well as supporting segments for a secondary resonator within said outer cylinder (See Figure 1, #16, #18, #32, #34).

With respect to Claim 9, as applied to Claim 1 above, Hanson describes a secondary resonator having a horn like ending (See Figure 1, # 42).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson in view of House as applied to Claim 1 above, and further in view of Murray (3,219,144).

Hanson and House are relied upon for the reasons and disclosures set forth above.

Hanson and House fail to describe a cylindrical seal for means of sealing the area between the outside of said inner resonator and the inside of said moveable plug as required by Claim 6.

Murray describes a cylindrical seal which seals the area between said inner resonator said moveable plug (Figures 1 and 3, #6; Col. 2, Lines 8-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a seal between the resonator and moveable plug to allow said plug to slide smoothly as opposed to the friction that would be caused in absence of said seal.

**Conclusion**

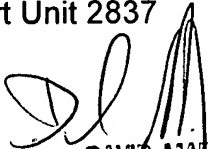
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent arts of record related to exhaust mufflers are disclosed in the PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy A. Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Friday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeremy Luks  
Patent Examiner

Art Unit 2837  
  
DAVID MARTIN  
SUPERVISOR  
TECHNOLOGY CENTER 2800